and were enfeoffed to the Kounta tribe, or Dag-Ech-Cheich. The origin of the oldest known families goes back no more than two generations. They are the Ehellellou, who have left descendants, the Badahol and Mohamed /families/, today extinct, and the Rati whose descendants are now settled among the Taitok.

564

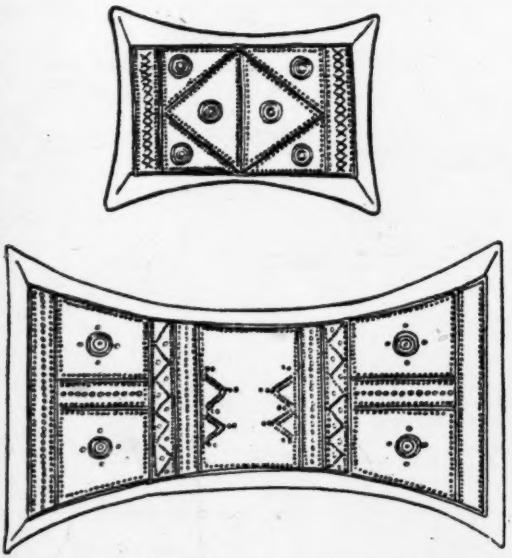


Fig. 19. Silver amulets worn by men on the crests of their hairdo.

At the time of Amenokal Attici (1899) there was a chief of the blacksmiths named Alamine whose role was to oversee and distribute the work and to reduce the newly captured blacksmiths from the Sudan to obedience. He also had judiciary power.

564 326 [301 789 531] [692]

Formerly endogamy was the general rule, but since the occupation it has been violated numerous times, and artisans often take their wives from the Harratin and the Eklan.

564 [582 177]

Their industry is limited to the fabrication of jewels, padlocks, knives, and a few wooden utensils. They are particularly occupied with repairing worn articles.

/179/ In the Sudan the Enaden are much more numerous. That is why industries there are found to be much more developed, even more so since more varied and more abundant raw materials are at their disposal.

564

564 The Enaden do not pay any vassalage dues. Socially, they [651] occupy a place halfway between the Imrad and the Iklan. In certain cases they can even possess captives, and many of them have [567] at their command an affluence unknown among the Imrad, and

[414 531 326]

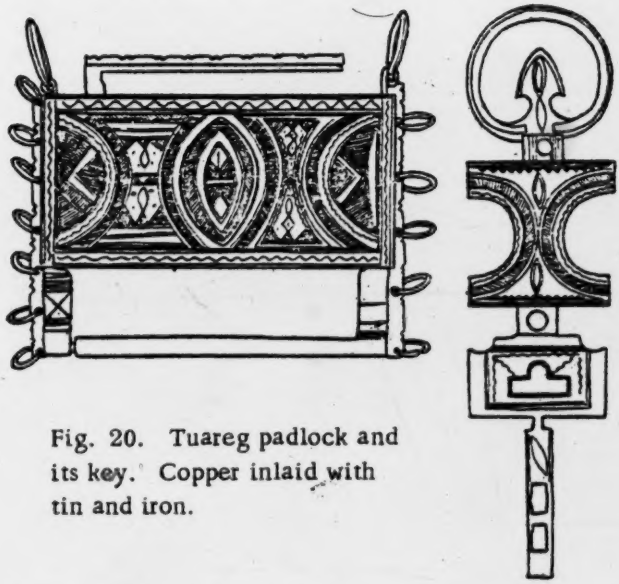


Fig. 20. Tuareg padlock and its key. Copper inlaid with tin and iron.

even among some Imochar.

/180/ Chapter 2

## Confederation of the Ahaggar

173 Oral traditions handed down among the northern Tuareg maintain that they originally came from the city of Es-Souq in Adrar des Iforas, known as Tademeka in ancient times, and equidistant from Timbuktu and In-Salah.

224 which is rolled up on a stick, one end of which is cut in a point. A
[23] second apparatus consists in a little wooden disk covered with hide, the whole mounted on another stick a little longer than that of the first apparatus which is embedded between the layer and the arc, while the pointed stick is fastened in the hole of a bead or on a little leather ring fixed on the leather disk. A lasso is placed on this disk, and its end is fastened on the main part of the pointed stick.

This trap is generally placed on the paths frequented by gazelles and lightly covered with sand. If the animal puts its foot on the leather disk, the pressure that it causes unhooks the pointed stick; the shock of this can break a paw and in any case it tightens the lasso around the paw.

[17 More recently the Tuareg have used the metallic spring trap
32] of the English type, which their blacksmiths now know how to make. They have replaced the balanced bait pan by a taut skin on which they have attached a large glass bead. The bait is fixed to the bead and is more sensitive to the touch. This trap may accidentally catch gazelles, but the most common catches are hares and jackals.

224 The Tuareg hunt on the lands over which they range and have
423 no right to hunt on the lands of the neighboring tribes. If such a case occurred, they would be obliged to give the game to the owners of the area. The latter may at least grant back part of the meat, but they keep the skin, especially when it is a wild sheep.

/243/ Some regions are the hunting fief of a single man. So, in the Koudia, no one has the right to hunt on Tahat Peak without the permission of its owner, who is a descendant of the old Isebeten tribe. At any rate, the skin, head, and half of the animal must be handed over to him.

224 The Ahaggar Tuareg have had rapid-firing guns at their
411 disposal for a few years. They are not good shots, but they know admirably well how to approach game, so that they have made massive massacres which will take a long time to repair.

several different spots, and it is not impossible that the species bred today in the Ahaggar is of African origin. Bones of the species are found in the Neolithic layers of the Sahara.

At the present time there is a death struggle between the goats and trees in the Ahaggar. The goat itself is capable of browsing the lower branches and destroying them, thanks to its agility. The Tuareg do the rest when pasture is scarce, by felling the main branches to put them within the reach of the animals. And so, in a relatively short time, trees, and the tahla (Acacia sp.) in par-particular, will be only a memory in the Ahaggar. Nothing has

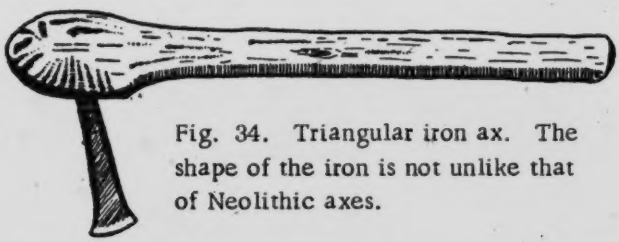


Fig. 34. Triangular iron ax. The shape of the iron is not unlike that of Neolithic axes.

been done by the French administration in the Ahaggar to protect the trees, when it would be sufficient to close some valleys for several years, while taking into account the needs of the shepherds. Measures of this kind have been taken in the environs of Goundam and have given very good results.

Prolonged dryness which causes a lack of pasture often puts goat raising in difficulties. The birth rate is stopped short, and mortality may result to such a great extent that the number of animals sometimes falls to one fifth. Then many years are needed to build up the flocks, granting, of course, the arrival of favorable rains.

The careless and fatalistic Ihaggaren do not even try to step up breeding by buying sires in Adrar or in Aïr. They let their weak flocks reconstitute themselves by their own means, which sometimes requires many years. In case of an overabundance of births, they limit the number of animals, for they are well aware

283 Spinning is done by all Tuareg women. They spin the hair of the
462 goat, the camel, and the wild sheep, making very solid cords and saddle girths.

286 Weaving is limited to the making of goat's-hair, or more rarely camel's-hair, bags. This is a very primitive technique which does not require any loom and which is, furthermore, in the process of disappearing from the Ahaggar, where only a few noblewomen still practice it. It is completely extinct in Sudanese tribes.

324 Stonework, a relic of Neolithism, was still carried on in the Ahaggar
438 a few years ago to make arm rings. Layers of granitoid schists were formerly worked [415 at Aseksem and Terahart in the Tafedest. We also found 327] an ancient workshop south of Silet on the banks of the Tamanrasset wadi. Today all stone bracelets come from Air and a few from Hombori, where they are manufactured by Tuareg or Hausa artisans.

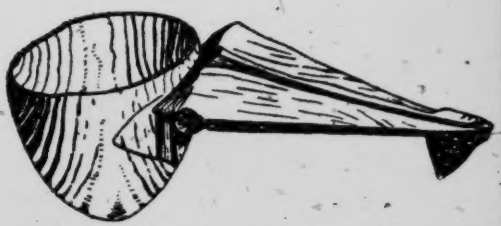


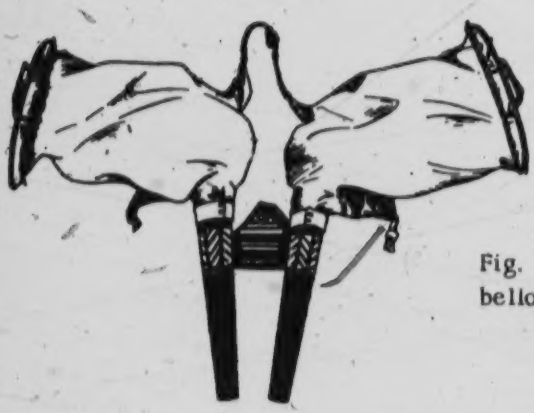
Fig. 48. Tabarekkat wooden ladle, also serving as a drinking vessel.

326 Metalworking is exclusively in the hands of the Enaden, who transform
[564 silver, copper, and iron. These materials, with the exception of iron, do not exist in a native, workable state in the Ahaggar. But although iron [135 ore is common /279/ in some volcanic rocks of their country, the Tuareg do not have it exploited, for it is found in such small particles that it necessitates a disproportionate amount of forge work for the quantity likely to be recovered. Nevertheless, the memory of casting ore still remains among the Enaden. They use several forges at once, but do not know [439 the blast furnace. The caravaneers coming from the north or from the Sudan used to bring metals.

117 At the present time silver comes from coins which are melted. For
326 years the Tuareg have had Maria Theresa dollars at their disposal; these

coins were for a long time the money standard in all of Central Africa. 177 326
(1) Copper is chiefly furnished by cartridge cases, and iron by abandoned

1. The Maria Theresa dollar was introduced into Africa at the beginning of the nineteenth century by navigators [177 436]



[325]

Fig. 49. Double forge bellows.

and traders who visited the Gulf of Guinea. With the iron bar, it became the basis of commercial exchange, and it was circulated in the interior of West Africa as well as in Abyssinia.

scraps of old carriages, auto springs, sheet metal, tin cans, etc.

Aluminum, which is beginning to penetrate into the Niger region, 177 328
is not yet utilized in the Ahaggar. So far the pipes and guys left to the four corners of the desert by wrecked airplanes have served only to make tent poles.

326 [301] /280/ Silver is used to make jewelry--pendants, pendants for the hair, bracelets, rings, earrings, amulet cases, etc.

Copper furnishes a number of more important and naturally more commonly used articles -- saddlery articles, cavessons for camels, highly ornamented padlocks with keys, hair knives, etc. This metal is generally better worked than silver. It is often chiseled, engraved, and topped with applications of tin by a technique which is reminiscent of damascening. Various articles, little knives, or medical cases bear inlays of copper on iron.

Fig. 50. Hammer.

325 Copper and silver are cast in little terra cotta crucibles, and the high temperature needed to melt them is obtained by a forge with a double hand bellows or with a single bellows of the kind used by the Saharian Arabs and the Sudanese.

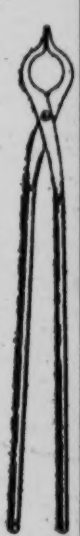


Fig. 51. Blacksmith's tongs.

438 326 411 The Ahaggar Enaden do not manufacture arms; they merely repair them. Sahara, daggers, and lances were for the most part manufactured by blacksmiths of the Kel Dinnik tribe (Ioullimmiden from Tahoua). Saber blades were imported from Rhat and mounted by the artisans. Lances came from the Kel Geres, where the Enaden of that group worked an iron mine which is located beside the village of Tassaoua.

Only a few daggers were made in the Ahaggar.

323 [172] Pottery is in common use among the Tuareg. It is generally not in use among nomads. However, it has been widespread in the Sahara for a long time, for quantities of potsherds and fragments are found on the regoliths /regs/ which are subsequent to the Neolithic period. Furthermore, its use is becoming more and more generalized in the camps.

Plate XVI

326

Settled in improvised camps, blacksmiths work in the open air making weapons and utensils needed by the Tuareg.

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The Imrad women are in charge of taking the flocks to pasture and water. Every two or three days they go to the wells, drawing water for the goats, who drink out of wooden bowls or out of skins used as containers by placing them on mounds of sand in the shape of a basin. They fill the waterskins which will be transported to the camp by asses.

492 The tarik is the saddle commonly used by the Ahaggar Tuareg, the one which is peculiar to them and which they must have known from time immemorial. The tamzak, which is a decorated variant [177] of the tarik, owes the origin of its decoration to Hausa influence. [171] In fact, the peculiar technique of applying perforated metal bands enhanced by colored leather fabrics is found in horses' saddles of the

[531]

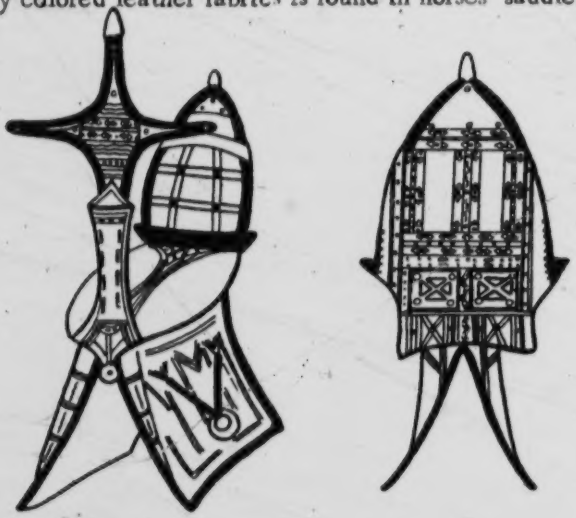

Fig. 54.. 1 The camel saddle called tamzack. 2 Detail of the back of the saddle.

Hausa from the Damergou, Sokoto, etc., and there is no doubt that that art, which is unrelated to that of the Tuareg, is much more developed among those peoples.

438 The two saddles are usually made in Aïr, indeed even at Agadez, but the old Tuareg blacksmiths manufacture only the ● 326 tarik. The tamzak is the work of artisans, who are usually settled 492 at Agadez and more or less crossed with artisans of Hausa origin. 492 Ahaggar blacksmiths make only the tahiast, which is the saddle 171

721 When raids were led against Sudanese camps, they were as in-
727 terested in the Negroes and Negresses as they were in the camels.
527 The kidnappers kept some of them to serve as servants and sold the others on the markets of In-Salah and the Touat.

726 Once the booty was stolen, the raiders went by forced march to the point agreed upon in advance, where they rejoined the other group of meharists.

The raided people, on the other hand, organized themselves, but they did not try to overtake the raiders immediately and did not wear themselves out in vain pursuit. As the return route of the raiders was known, they tried to reach a well where they had to pass; if they were successful in arriving before them and cutting them off from water, the real combat began, this time fierce and often quite deadly.

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531
326
281

Fig. 55. Tuareg lance. The iron blade is decorated with copper inlays. The part where the hand is put is covered with leather, and a little leather loop placed behind is intended to hold the index finger which gives greater propulsion to the lance when it is thrown.

Hard pressed, the Tuareg formed in a square behind their camels and defended themselves under cover of their bucklers; /323/ when they saw it was impossible to take possession of the well, they abandoned their loot. The battle came to an end, and the raiders were rarely pursued. In the opposite camp, a certain number of men were left as sentries to guard against return offensives, and the others tried to gather up their animals and lead them back to the douar /encampment/.

727 When the raiding party was safe, the men divided up the booty in more or less equal parts, depending on each person's merits during the fight. But in some tribes, customs related to the tioussé demanded

567 dowry. But slaves are well fed and cared for as a rule; they get two or three days off each week to look after their own affairs, their children are brought up with the children of their masters, and custom forbids the freeing of a slave who is either too old or too young to fend for himself. A slave may even have a few goats of his own, although when he dies they are not inherited by his family but revert to his master instead. Barth (1857a, vol. 1, p. 387) notes as a striking exception that he saw slaves hitched to a plow and driven with whips in the Auderas Valley, some 60 miles northwest of Agadès.

567 595 [827] Female slaves are often taken as concubines by Tuareg men of the Ahaggar, who prize them because they are less capricious and overbearing than Tuareg women are and "because they have cool skins," a point which would bear further investigation with a skin temperature machine. The children of such unions are often recognized by their fathers but do not inherit from them, and, although free, they have a debased social standing little better than that of their slave forebears. Moussa ag Amastan, who was Amenokal of the Ahaggar from 1905 to 1921,[12] remained unmarried for over 50 years, during most of which time he lived with a bevy of Negro concubines and a young Tuareg girl, named Harendou, whom he had captured on a raid into the Niger Bend country (Benhazera, 1908, p. 142; Lhote, 1955, pp. 221–23). Although this case was exceptional, it was by no means unique.

567 The slaves of the nomadic Tuareg, like those of sedentary communities in the Sahara, seem to have no tribal or clan organizations, but they too have a strong feeling of corporate solidarity that finds expression now and then in nocturnal jamborees which are Sudanese in character.

326 171 The smiths of the Ahaggar present a familiar culture pattern that characterizes groups of smiths and tinkers which, as we have seen, are to be found living among a whole series of nomadic peoples scattered all the way from Baluchistan through Arabia and on, southwest-

[217] [12] Lhote (1955, p. 220) gives the date of Moussa's death as 1920, the official genealogical table of the Ahaggar nobility, which is kept in the archives of the French Army post at Tamanrasset, gives it as 1921, and Foley (1930, p. 9) gives it as 1922. In 1956

326 ward and then westward, across the North
[171] African hinterland to the shores of the Atlantic. The general description of this pattern, given above in chapter V under the sub-heading *Special Classes and Minority Groups* in the section on *Agricultural Centers*, leaves little more to add.

326 Smiths of the Ahaggar usually live in single
463 family units or small groups widely separated from each other (fig. 50). A few families follow Tuareg groups on their seasonal rounds, but the great majority remain sedentary most of the time in one agricultural center or another, and go out only now and then for a few weeks or months, to do a general repair and re-equipment job in the camps of some
[759] nomadic tribe or clan. The men work wood and metals and are also barber-surgeons, while the women specialize in fancy leatherwork and embroidery. In addition to these functions
[584] and those previously mentioned, both sexes of the smith community act as both go-betweens and spies in clandestine love affairs. They also engage in intertribal secret intelligence work. And a major Tuareg chief may sometimes have a smith as his most trusted counsellor and confidant.

326 The smiths usually dress as do the poorer
[291] Tuareg. The men all wear the teguelmoust but in a sloppy fashion, and they seem to have no qualms about exposing their mouths.
[582] They are endogamous and monogamous as a general rule, although a few have more than one wife and some of them marry Haratin or occasionally slaves. Ostensibly because of their lowly social status, but probably in fact more because of the fear of sorcery that they inspire, they come and go everywhere as they please, although always with a cringingly ingratiating manner. Even after one has come to know them fairly well they still give an impression of constant watchfulness and profoundly sycophantic tact of the delicately oiled as opposed to the heavily greased variety. The smiths are the most perspicacious and cleverly adaptable of all Saharan peoples, for they have learned to live off and so outlive flamboyant warriors with their retinues and

[217] the author was so fortunate as to obtain a copy of the genealogical table in question, thanks to the very kind cooperation of Captain Roger Bret, Commandant of the *Annales du Hoggar*, and Claude Blanguernon, Director of Nomad Schools.

● 326 grubbing gardeners alike. They have turned their status as "untouchables" to their own advantage and so remain untouched.

326 142 Physically the smiths of the Ahaggar cover the whole range of human variation between the Bush Negro type on the one hand and the Berber variety of Mediterranean on the other, but they seem to fall mostly within a highly variable category characterized in general by "European" features combined with a yellowish brown or occasionally coppery skin, thickish lips, and curly or frizzled hair. They are lean in build as a rule, but seem softer and less wiry than the more active Tuareg (fig. 57, *a*).

326 174 And this brings us to another exasperating blank in our picture of Saharan peoples. The smiths of the Ahaggar claim to have come from the Adrar n Ifoghas and to be related to the families of smiths who live there now, and Benhazera (1908, pp. 221 and 223) reproduced an old Arabic text which states that "the smiths and the Fulani have the same mother." Cline (1937, p. 141) maintained that the art of smelting iron was introduced into the western Sudan by "camel-riding Berbers" from the North, across the Sahara. But no one really has any idea where the smiths of the Ahaggar actually did come from or when, where and from whom they first learned their trade. No one, so far as the present writer knows, has ever published measurements or blood group classifications of a single one of them, and no one seems to have found out anything to speak of about their social organization or even their kinship terminology. Not a dozen photographs of their faces are available to students. Why? Simply because the Tuareg are spectacularly romantic while the smiths are not.[13] The smiths of the Ahaggar and of the Sahara as a whole have suffered the same fate that the Spanish gypsies might have suffered had George Borrow not been born, and, like the Spanish gypsies, they are 614 disappearing fast.

565 173 A number of vassal clans of the Ahaggar confederation are said to be of Arab or mixed

[114] [13] Here the author has laid himself wide open to a very embarrassing question. "Why," he seems to hear the frustrated reader ask, "haven't you done something to fill this aching void yourself since you find it so distressing?" The author's time in the field has been severely limited by the exigencies of writing this preliminary survey, and recently by political

4: Benhazera--62 G-5 (1905) 1908 MS25 Tuareg MS25
Hoggar

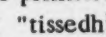
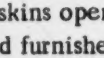
## Chapter XI

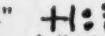
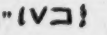
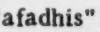
### Industry. Blacksmiths

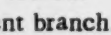
There is no industry in the Ahaggar. They do not exist. 433
One cannot describe as an industry the minor arms repair that 326
a few blacksmiths make, nor the little wooden implements that the Tuareg make for their personal use.

We have seen above that the Ahaggar Tuareg buy all 326
their arms in the Aïr. They are not made at home. [439]

In the Ahnet I watched a blacksmith, Eg Ahnet, work. He was mending spears, sabers, and daggers, and he told me that he also made some jewelry when they were ordered from him. He asked for preserve cans to make his settings. His tools were quite primitive. He had:

A bellows, "tissedhi"  , made of two iron tubes set into a hollowed piece of wood onto which were fitted two waterskins open at the ends. These openings were held by rings and furnished with handles. The iron tubes blew the air into a clay furnace, "anefif"  , set before the fire. /72/

An anvil, "tahount" 
Files, "azezoua"
Pliers, "ir'emdane" 
A large hammer, "afadhis" 
A small hammer, "tafadhist"
Tin-snips, "timouda"
A small hatchet, "tetaout" , which he had made from a bent branch.

Finally, a rake, "asekredh"  , which he hafted with two wooden handles each time he wished to use it.

He also made locks and keys of copper. He complained [414]
of hard times and how the craft no longer prospered. Where [178]
was the age of the great raids, the expeditions from which arms were brought back to him to repair and sharpen! Where are we going? Times have really changed!

Many legends circulate about blacksmiths. They say that 326
because they work with iron and fire, they will go into the fire 565
of hell. They are scorned, first because they devote themselves
to a manual craft, a disgrace in the eyes of a Tuareg, and
secondly because it is said that they are of Negro origin. It is
also claimed that they were pagans and that their conversion
to Islamism is not sincere. They are also taken for sorcerers. [754]
The sheik Ben Djellas (see the Appendix /not translated/) says
of them: "Blacksmiths hate God and his Prophet, and they
betray God and his Prophet." Their ancestor was called
Tamamenet.

The blacksmith does not belong to any tribe. He goes
where he pleases, wherever he finds work. Sometimes he goes
to war, and he is said to fight well, but a noble Tuareg will not
cross swords with him.

In the Ahaggar a blacksmith is called "mr'allem," variation 326
of the Arab "maâlem." However, there is a word in Tamashek [192]
for him, "inedh," plural "inedhane," but it is not used. /73/

At Tamanrasset I was shown many ancient graves (of the [764]
"chouchat" shape) which, it seems, were the burial places of
a tribe of blacksmiths said to have been massacred and died of
starvation a very long time ago.

The gardens of the Ahaggar "ar'erems" are worked by the 241
Harratine of the Touat and the Tidilkelt, who bring their tools 312
with them. It is they also who dig the "foggaras," or covered 565
wells, and all the tools that they use come from the Saharan Oases.

## Chapter XII

## Agriculture. Ar'erems

While in all of the Ahnet no trace of agriculture is to be 241
found, however small, because of the scarcity of wells, whose 361
312

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25



564 region until about a hundred years ago. During the reign of the Ahaggar *Amenukal Elkhaj Akhmed*
463 (1830–1877) black-skinned agriculturists of the Tidikelt oases immigrated to Ahaggar to cultivate
567 gardens on behalf of the pastoral Tuareg. The agriculturists of Tidikelt when settled in Ahaggar were joined by many Tuareg slaves (*Iklan*) who are now free and known as *Izeggaren*, or *Ḥarratin*, like the
191 immigrants. People of this particular caste, as a result of its mixed origin, are frequently bilingual, speaking Arabic as well as Tuareg language (*tamahaq*). The *Izeggaren* (*Ḥarratin*) are generally less
142 negroid than the slaves. They are racially very mixed and many of them have certain europid features.
142 Their skin-colour is less frequently black than dark brown, and the name *Izeggaren* (sing. *Azeggar*) refers to that particular colour. An agricultural caste identical with that of *Izeggaren* does not seem to exist in other Tuareg groups, but a negroid agricultural population of the Ṛat oasis known as *Ikewweren* apparently has much the same status. A few families of the agriculturists living at Abalessa in Ahaggar claim descent from *Ikewweren* immigrants.

361 *Kel Ġanet* (sing. *W Ġanet*). This word refers to the inhabitants of the Ġanet (Djanet) oasis in Tasilé-
144 n-Ajjer. The population of this oasis is a very mixed one. Negroid types are prevalent but fair-skinned
565 europid types are not uncommon. In Tasilé-n-Ajjer the *Kel Ġanet* have much the same position as
567 Tuareg vassals (Imṛad), while in Ahaggar, where there are *Kel Ġanet* immigrants, their status is rather like that of other sedentary agriculturists mentioned above. In their homeland the *Kel Ġanet* may possess slaves like other Tuareg vassals, but those living in Ahaggar are never slave-owners.

564 *Ineden* (*Ineden* in Ahaggar) (sing. *Ened*). These are the blacksmiths who are found in all Tuareg
326 groups. They form a very important caste as Tuareg craft is little developed. The Tuareg obtain their weapons and many other implements from the blacksmiths who also make silver ornaments for Tuareg women. If it were not for the blacksmiths the Tuareg material culture would indeed be a poor one. People of the other black-skinned castes are also highly dependent upon the blacksmiths who make
162 hoes, sickles, and the like. In the two groups of Northern Tuareg there are very few blacksmiths – only a few families who live in agricultural settlements. In Southern Tuareg groups blacksmiths are very numerous, and many of them lead a pastoral life similar to that of the true Tuareg. The origin of the
564 blacksmith caste is unknown. Many blacksmiths claim their ancestor or patron saint to be *Sidna*
173 *Dawud*, that is "Our Lord David", who is said to have lived in an eastern country near Mekka. This myth intimates Jewish descent and it is a fact that there are many Jews among smiths and goldsmiths in Northern Africa and in the Middle East. This is well documented in literature (cf. Nicolaisen 1963). A relationship between Tuareg blacksmiths and Jews is also in accordance with two traditions told about the immigration of blacksmiths to Tuareg countries:— 1) According to a tradition collected by Lhote, the blacksmiths descend from Jews who originally lived in the oasis of Tementit in Tawat. At the end of the 15th century they were driven southwards by the Arabs (Lhote 1955a, p. 210 f.). 2) A tradition collected by Foucauld claims the blacksmiths to be Jews from Morocco. They followed Berber-speaking tribes from that area on their southwards migration along the Atlantic coast (Foucauld 1951–52, III, p. 1300). These traditions are interesting and they do not disagree with the fact that most blacksmiths among the Northern Tuareg comparatively recently have immigrated from Ayr and
564 Adṛaṛ-n-Foṛas. It is difficult to state the original racial position of the blacksmiths. Though most of
144 them are predominantly negroid there are also rather europid types among them, and Tuareg of Ayr

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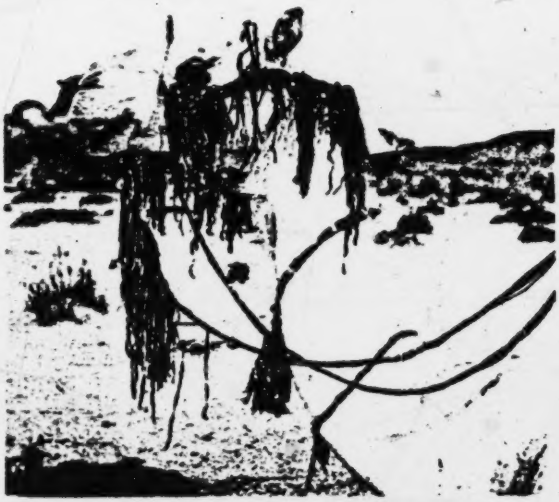

Fig. 52. The *akeskabbu* shakles connected with a leather rein richly decorated with fringes of the same material. This headgear is now in the National Museum (N.M. G. 5192). Hanging around the camel's neck is also a neck collar (*takawt*) with a brass bell (*amayna*) which is also now in the National Museum (N.M. G. 5191) (cf. Fig. 74b). Below the brass bell is an amulet case fixed to a piece of goat's hair. Ahaggar, the *Aĝah-en-tehlé* tribe.

camels and for other animals which are difficult to control (Fig. 48). Such halters are known by the term *amerar* among the Ayr Tuareg. Certain camels which are difficult to catch even when hobbled during grazing constantly wear a halter provided with a short rope hanging down from the head – a device applied to many fierce bull-camels (Fig. 56).

To break-in young riding camels the Tuareg frequently use a double rein one end of which is tied around the animal's head to serve as a halter while the other end is noosed around the lower jaw according to the method generally used for pack-camels and described above. But for trained riding camels the nomads normally content themselves with the use of a single rein (generally known as *tarant* in Ahaggar, in Ayr as *trézem*) plaited of goatskin or goat's hair and attached to a copper ring (*tigemt* in Ahaggar) inserted in the right nostril of the camel (cf. Fig. 43). This is done by the blacksmiths who also manufacture a very special headgear (*akeskabbu*, or *taryet* in Ahaggar) for riding camels which are difficult to control. The rider when using such a head-gear has a double rein one end of which is attached to a nostril ring (*tigemt*) while the other end is connected with two iron shackles known as *akeskabbu* (*taryet*) and *amadel*. When the rider pulls the right rein the camel is pulled at the nostril ring, but when he pulls the left rein the two iron shackles are tightened around the bridge of the nose and the lower jaw of the animal. The system is illustrated Figs. 50–52. Blacksmiths also make very elaborate halters of this type to be used mainly as an ornament of riding camels on festive occasions. In such cases the halter as well as the rein are richly decorated with coloured

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221 *233 824 tagayt, while the *Iwllemmeden Kel Dennek* at this period will camp around Ingal. Many Southern Tuareg leave the savannah country to avoid its heavy rainfalls and stock-diseases to let their animals benefit from the salty water and plants in the *Azawaɣ* country.

133 162 137 In the country west of the Ayr Massif, the Tamesna Plains, there is in addition to the Ayr Tuareg a numerous population of Ahaggar Tuareg who live constantly in these regions. These plains are botanically different from the mountains. Perennial vegetation is scarce though there are some *tamat*-acacias (*Acacia flava*), but there is a very rich vegetation of annual plants of great importance to *233 824 domestic animals. Among these plants can be mentioned *alwat* (*Schouwia purpurea* ssp. *Schimperi*), which is very valuable for camels and also good for sheep, *adreylal* (*Astragalus Vogelii*), and *tagellet* (*Colocynthis vulgaris*). The two latter plants are valuable as fodder for all domestic animals. It is noteworthy that these three species of annual plants last longer than other annual species. They do not wither at the beginning of the *ɣarat*-season, but remain fresh and green all through the winter until about *tabsit*.

It is evident that Tuareg knowledge of botany is extremely comprehensive, and that they use this knowledge to make stock-breeding as rational as possible. They may perhaps not be so rational in protecting pastures, for they cut acacias' boughs to feed the kids resting in the camps, and it is most possible that they also overgraze certain pastures. However, the grazing grounds are very vast in comparison with the number of pastoralists, and I believe that overgrazing and arboreal devastation take place mainly around villages and towns where the flocks of sedentary people graze continuously in the same area. In Ahaggar the valuable fodder plants and plants which are important for collecting are often protected for two or three months in order that they may become fully developed (cf. p. 150, 179).

*233 The Tuareg take great care that their animals do not lack water. It is true that camels and also donkeys can do without water for many days even in summer, but at this season camels should preferably be watered every two or three days, and goats are always watered every two days when the weather is hot. In winter the animals are not watered so often, and this is true particularly if the animals feed on fresh annual plants. Camels can do without water even for weeks and months under such favourable

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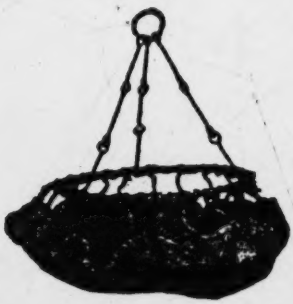

Fig. 97. The leather bucket known as *aje* to the Northern Tuareg. The leather is tied to an iron ring made by blacksmiths. Collected in Ahaggar by Olufsen. Dimension of the iron ring: 0.275 m in diameter. (N.M. G. 1.51).

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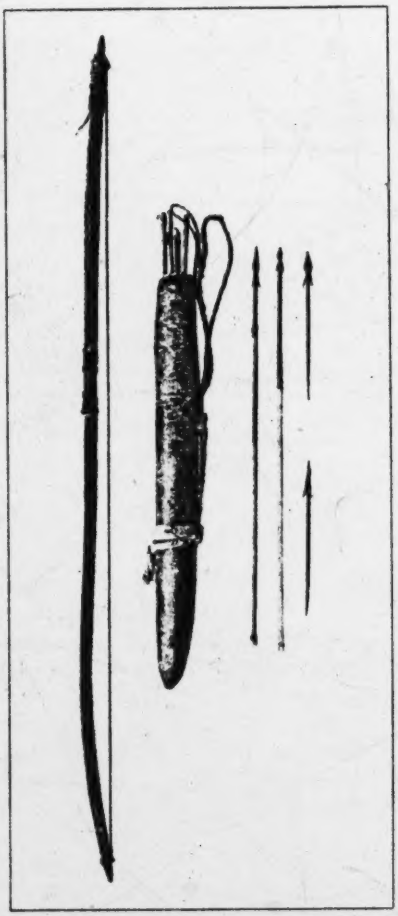

Fig. 119. Bow (*tagazzi*), arrows (*imeran*), and quiver (*thomaren*) from the Hausa-speaking population living south of Ayr around Aderbissinat. The bow is made from wood of a tree called *ddinem* and has a string of ox-hide. The arrows have shafts of wood or reed; their iron points are made by blacksmiths. The quiver is made from ox-hide with a plaster of cow's excreta applied to the inner side. Dimension of the bow: 1.20 m. (N.M. G. 6621).

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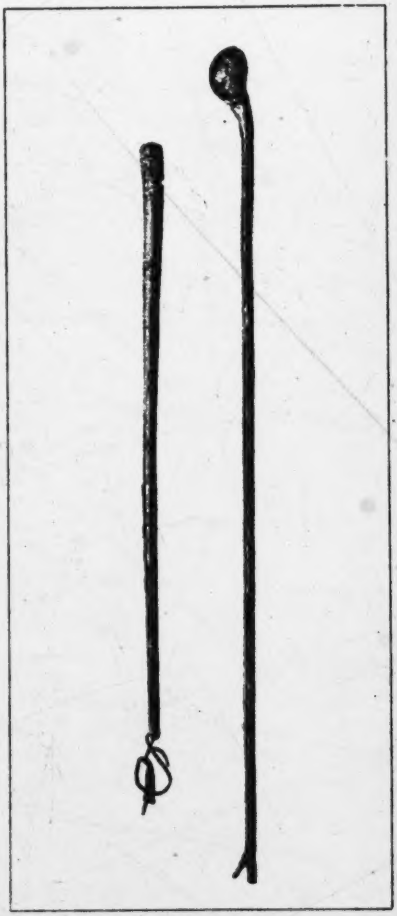

Fig. 120. Tuareg clubs.

a. Wooden club (*aburi*). Dimension: 0.995 m long. (N.M. G. 1.159). Ahaggar, Olufsen's Collection.

b. Wooden club. Used for weapon and for cattle-driving by Tuareg around Timbuktu. Made from a bough of *Combretum aculeatum*. Collected by O. Hagerup. Dimension: 1.39 m long. (N.M. G. 3086). All slaves I saw among the *Iwllemmeden* near Ayoru carried this weapon.

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Fig. 153a–b. Tuareg funnels (*ɛssegefi*, pl. *issegefa*) which are used for milk, butter, and for other liquids.
a. Wooden funnel ornamented by burning. Made by blacksmiths. Ahaggar, the *Dag Ilali* tribe. Dimension: 0.210 m high. (F.M. 240).
b. Funnel plaited from straw of *taleggit* (*Juncus maritimus*) with the rim reinforced with leather. Made by Tuareg woman. Ahaggar, the *Dag Ilali* tribe. Dimension: 0.135 m high. (F.M. 243).

234 *4/15 In Ahaggar the method of churning butter is as follows:— Milk of the morning yield is put into a skin bag (*ɛmesesley*) (Figs. 156–157) to remain in this bag until next morning when churning takes place. During the hot season the *ɛmesesley*, filled with milk, is placed in the shade of the tent in daytime, while in winter it is placed in sunshine, or close to the fire. Some milk of the evening yield is sometimes added to the morning milk in the *ɛmesesley*. Before churning the milk thus soured is poured into the proper churning bag (*aɣiwir, tanwart*) which is inflated and shaken. Churning bags may vary in size; when there is little milk to be churned a little bag is used and shaking is done holding it in the hands (Fig. 158). When milk is very plentiful, butter is sometimes churned in larger bags (*anwar*), which at one end is attached to a pole, while shaking is done by pulling the other end of the bag with one or both hands. When the milk is shaken in this way it forms small white balls of butter which [412] are removed from the churning bag with a wooden spoon (Fig. 191) when water has been added. This [262] white butter (*udi wa mellen*, or *tesendut*) is occasionally used for food without further preparation, [824] but this is not normal, for newly-churned butter is generally put into an earthen pot (*tɛ̈rirt*, or *ufrun*) (Figs. 186, 187a–b) together with parts of an annual plant known as *aynemis* (*Chlamydophora pubescens*) (Fig. 160) to be heated over the fire. Some Tuareg also add meal of dried dates, or of horns of barbary 231 sheep. After heating, butter (*udi*) assumes a dark yellow colour. It is stored in containers made of *4/15 camel's hide (*tahattint, asaɣen, aɣanha*) (Figs. 161–162), or in Sudanese calabashes (*azenu*) (Figs. [824] 163a–b). A particular metal pail (*ɛ̈rir*) (Fig. 164) manufactured by native blacksmiths is also used for butter in Ahaggar,

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**Fig. 164. Pail (*érir*) made from tinned brass by blacksmiths. It is used for storing butter to be used for food preparation in the tent. Pails of this type form part of the dowry in the *Dag Rali* tribe. Ahaggar, *Ahl Azzi* Arabs of Tamanrasset. Dimension: 0.155 m high, 0.230–0.235 m in diameter at the rim. (N.M. G. 5820).**

they perform a sacrifice, the idea of which seems to be an identification of the man and the killed animal. This idea appears most clearly at the sacrifice made on the occasion of the name-giving feast seven days after the birth of a child. A marabut, that is a Tuareg of the *Ineslemen* class, and the father of the child stand close together with their faces towards Mecca while the animal to be sacrified is kept to the ground. The marabut cuts the animal's throat and doing so cries out the name to be given to the child, and this name is thereupon repeated by the child's father. When the killing is performed in this way the knife (*elmusi* in Ahaggar; *ézegiz* in Ayr) and the cut across the throat are washed with water before skinning is undertaken. I have dealt with certain ideas of Tuareg sacrifice elsewhere, and have stated that on certain occasions they may sacrifice not to God but to the *Kel Asuf* spirits (Nicolaisen 1961, p. 122 f., 147 f.). But whatever may be the ideas attached to Tuareg sacrifices all animals, with the exception of the camel (cf. above p. 65), are killed by cutting their throat.

The methods of meat preparation are almost identical in Ayr and Ahaggar. The most common method everywhere is cooking in an earthen pot, known in Ahaggar as *ufrun*, *téŋirt*, *alekkin*, or *talekkint* according to its size and form, or in a metal pot (*éŋir*) of European origin. Such European pots are common everywhere in Tuareg camps, but earthen pots are still used though less durable, for earthen pots are cheap. Pots made of metal or copper, which are also known as *éŋir*, were also found among

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Fig. 171. Ordinary meat-knife (*elmus*) of the type used among Northern Tuareg and Arabs. Its broken handle is mended with hide of barbary sheep sewn with leather thread. Ahaggar, the *Dag Rali* tribe. Dimension: 0.28 m (total length). (F.M. 249).
All knives are manufactured by blacksmiths.

wheat bread is eaten particularly during migrations and on trading expeditions, or in periods when butter is rare (Lhote 1955a, p. 262). This statement disagrees with my own experience. Wheat bread is an ordinary diet of many Northern Tuareg. Bread is also baked from barley and from certain wild seeds (notably *tawit*, *Chenopodium Vulvaria*; *éhéyefyef*, *Aizoon canariense*; *tulluit*, *Aristida pungens*) and wild roots (*ahahel*, *Cistanche Phelypaea*), while millet and sorghum are considered less suitable for baking. Seeds are generally prepared for baking by grinding them into flour by saddle querns or handmills. In Northern Tuareg country there are two types of bread which have been introduced as a result of contact with Arabs or the Arabic-speaking *Harratin*. One type is named *elfetat* and is baked

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Fig. 172a–b. Meat knives.
a. Knife (*ézegiz*) of Tebu type to be carried in its sheath around the upper arm. These knives are sometimes used in Ayr, Agadez. Dimension: 0.370 m. (total length). (N.M. G. 6620a–b).
b. Knife (*ézegiz*) of the double-edged type normally used in Ayr. The *Imezzureg* tribe. Dimension: 0.377 m (total length). N.M. G. 6665a–b).

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Fig. 203. Earthen incense jar (*elbakhkhar*). Ahaggar, *Ḥarratin* at Abalessa. Dimension: 0.179 m high. (N.M. G. 5889).

512). Most pastoral Tuareg of Ayr get their pots from Agadez, but pots are also imported from the south where they are of superior quality. These pots are said to be manufactured by black-skinned *Igdalen* Tuareg (cf. p. 432) of the southlands, notably by people of the *Ikenawen* class which comprises professional pot-makers. These people are not found among the *Kel Ayr* but are common in camps of the *Kel Geres* where I have met them. They speak *tamachek* but also have their own language which is said to be related to *Songay*. The pots made by these southern people are painted and decorated (cf. Fig. 205) in contrast to those of Agadez which are plain and of very simple forms (Figs. 204a–b). So far as I am aware painted and decorated pottery is rarely manufactured in Ayr nowadays. But Rodd states that such pottery in the form of pitchers with a blue design is made near Agadez (Rodd 1926a, p. 160 f., pl. 22 p. 209), and when I investigated ruins of stone houses at Iferwan I found a great many sherds of finely-decorated painted pots which must have been used up to the end of the great Tuareg revolt in 1917 when these houses were destroyed by the French. Lhote has also mentioned the decline of pottery techniques in Ayr, and he states that, apart from little incense jars, no painted and decorated pots are manufactured at Agadez nowadays (Lhote 1950c, p. 511).

Certain metal receptacles were known to the Tuareg long before the European occupation, notably a cooking pot (*érir*) made from copper, and the flat drinking bowl (*tamennast*) made from tinned copper or brass in Tripolitania, or in Tunisia. Metal receptacles are also manufactured by native blacksmiths in Tuareg country, e.g., the pail (*érir*) to be used for liquid butter (Fig. 164).

The blacksmiths are excellent wood-workers and make most wooden domestic utensils used by pastoral Tuareg (Figs. 21b, 37, 38, 58, 60, 61, 62, 63a–b, 75, 150, 153–154, 166, 176, 177, 178, 191, 194, 195, 212a, 219a–b, 285). The main implements for wood working are axes and adzes (Figs. 206a–d).